

Sigl et al.

S/N: 10/604,252

In the Claims

1 (Currently Amended) An extruded heat sink for use in cooling an electronic component, said heat sink having a body with a flat generally planar surface-portion and two laterally facing exterior surfacesportions, a plurality of thin fins extending outwardly from said body and being elongated in the direction along said two lateral exterior surfaeesportions, each of said lateral surfaeesportions having elongated ridges formed thereabout extending the full length of said lateral exterior surfaeesportions, the elongated ridges having a bottom edge displaced from the flat generally planar portion in a direction of extension of the two laterally facing exterior portions a distance and the elongated ridges constructed to removably engage a retention means for receiving the heat sink to a frame.

2. (Original) The extruded heat sink of claim 1 wherein said extruded heat sink is aluminum.

3. (Original) The extruded heat sink of claim 1 absent surface machining and absent surface holes therein.

4. (Currently Amended) A heat sink comprising:
a base having a first side and a second side;
a plurality of fins extending from the first side of the base and including a first fin and a last fin; and
a groove formed in the first and the last fin and constructed to engage a retainer therein, each groove offset from the base a distance of at least a thickness of the base.-upon translation of the heat sink relative to the retainer in a direction generally transverse to a length of the groove.

5. (Currently Amended) The heat sink of claim 4 wherein each of the first fin and the last fin further comprises a common section adjacent the base and a divergent section at a distal end of each of the first fin and the last fin, each distal end having a pair of fins and wherein the groove is formed proximate an interface of the common section and the divergent section further comprising a second fin extending from the first and the last fins.

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6. (Previously Presented) The heat sink of claim 4 wherein the retainer maintains a contact between the second side of the heat sink and a heat generating component.

7. (Previously Presented) The heat sink of claim 4 wherein the groove in the first fin is generally coplanar with the groove formed in the second fin.

8. (Currently Amended) The heat sink of claim 4 wherein the first fin and the last fin extend a distance from the base and a plurality of fins between the first fin and the last fin extend approximately twice the distance from the base.~~groove in the first fin and the groove in the second fin are a common distance from the base.~~

9. (Previously Presented) The heat sink of claim 4 wherein the plurality of fins extend a distance from the base longer than a distance between the first and the last fins.

10. (Previously Presented) The heat sink of claim 4 formed of extruded aluminum.

11. (Previously Presented) The heat sink of claim 4 wherein the plurality of fins are generally perpendicular to the base.

12. (Currently Amended) A heat sink comprising:
a base having a first ~~end~~ and a second end, and a thickness;
a pair of external surfaces extending a length greater than the thickness of the base above the base from the first and second ends of the base; and
a plurality of fins extending from the base between the pair of external surfaces; and extending a length different than the length of the external surfaces.

13. (Previously Presented) The heat sink of claim 12 wherein the length of the external surfaces is approximately half the length of the plurality of fins.

14. (Previously Presented) The heat sink of claim 12 further comprising a retainer constructed to engage an end of each of the pair of external surfaces.

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15. (Previously Presented) The heat sink of claim 12 wherein the base is constructed to thermally engage an electrical component.

16. (Previously Presented) The heat sink of claim 12 formed of extruded aluminum.

17. (Previously Presented) The heat sink of claim 12 wherein the plurality of fins are generally perpendicular to the base and generally parallel to the external surfaces.

18. (Previously Presented) The heat sink of claim 12 wherein the external surfaces are generally thicker than the plurality of fins.

19. (Currently Amended) A heat sink assembly comprising:

a heat sink having a base with a pair of generally parallel sides and a first end fin and a second end fin;

a retention ridge having an opening therein such that no portion of the ridge is co-planar with any portion of the base;

a plurality of intermediate fins extending from the base between the first and second end fins; and

~~a retainer constructed to receive the heat sink therein and removably engage the first and second end fins of the heat sink.~~

20. (Previously Presented) The assembly of claim 19 further comprising a heat generating device in thermal contact with the base.

21. (Previously Presented) The assembly of claim 19 wherein the plurality of fins are generally perpendicular to a section of the base between the pair of generally parallel sides.

22. (Previously Presented) The assembly of claim 19 wherein the heat sink is extruded aluminum.

23. (Original) The assembly of claim 19 wherein the first end fin and the second end fin each have a groove formed therein.

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24. (Previously Presented) The assembly of claim 19 wherein the plurality of intermediate fins are longer than the first and second end fins.

25. (Original) The assembly of claim 19 wherein the retainer is removably engageable to the heat sink by hand and without use of any mounting hardware or tools.